GenCore version 4.5

OM protein - protein search, using sw model

Run on: March 15, 2001, 10:52:21 ; Search time 35.6 Seconds
(without alignments)
13.447 Million cell updates/sec

Title: US-09-288-719-2
Perfect score: 75
Sequence: 1 GGGGSGGRASGGGS 14

Scoring table: BLOSUM62
Gapop 10.0 , Gapext 0.5

Searched: 268485 seqs, 34193795 residues

Total number of hits satisfying chosen parameters: 268485

Minimum DB seq length: 0
Maximum DB seq length: 2000000000

Post-processing: Minimum Match 0%
Maximum Match 100%
Listing first 45 summaries

Database : A_Geneseq_36:*
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2: /SIDS1/gcgdata/geneseq/geneseqp/AA1981.DAT:*
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14: /SIDS1/gcgdata/geneseq/geneseqp/AA1993.DAT:*
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16: /SIDS1/gcgdata/geneseq/geneseqp/AA1995.DAT:*
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20: /SIDS1/gcgdata/geneseq/geneseqp/AA1999.DAT:*
21: /SIDS1/gcgdata/geneseq/geneseqp/AA2000.DAT:*

Pred. No. is the number of results predicted by chance to have a score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.

SUMMARIES

Result No.	Score	% Query Match	Length	DB	ID	Description
1	75	100.0	14	20	Y50706	VH-L-VL construct
2	75	100.0	14	20	Y33596	VH-VL domain linke
3	71	94.7	15	20	Y50707	VH-L-VL construct
4	69	92.0	13	20	Y50708	VH-L-VL construct
5	69	92.0	13	20	Y33589	VH-VL domain linke
6	64	85.3	240	20	Y43326	Mouse BR96 sFv ant
7	64	85.3	240	20	W94178	Murine BR96 monocl
8	64	85.3	240	21	Y77553	Amino acid sequenc
9	64	85.3	301	19	W37085	Anti-human SC sing
10	64	85.3	738	19	W56163	New DNA sequence i
11	61	81.3	16	17	R86794	GM-CSF/EPO linker
12	61	81.3	232	20	Y08856	Expression constru
13	61	81.3	232	20	Y08769	Expression constru
14	61	81.3	339	21	Y44413	B7.2-beta 2 microg
15	61	81.3	358	21	Y44414	B7.2-beta 2 microg
16	60	80.0	14	16	R87024	Flexible linker se
17	60	80.0	14	18	W23417	Linker peptide for
18	60	80.0	14	19	W47355	Polylinker. Synth
19	60	80.0	14	20	Y23638	Linker peptide use
20	60	80.0	14	20	Y17953	Amino acid sequenc
21	60	80.0	15	13	R25983	Peptide monomer 21
22	60	80.0	15	15	R59500	Hydrophilic linker
23	60	80.0	15	16	R85123	Gene delivery fusi
24	60	80.0	15	16	R76683	Human ONS-M21 anti
25	60	80.0	15	17	W09323	Peptide linker arm
26	60	80.0	15	17	R99244	(Gly4Ser)3 linker.
27	60	80.0	15	17	R95067	scFv spacer peptid
28	60	80.0	15	18	W35984	Peptide linker SEQ
29	60	80.0	15	18	W10295	Peptide linker for
30	60	80.0	15	20	Y49219	Sequence of a link
31	60	80.0	15	20	Y43414	Peptide SEQ ID NO:
32	60	80.0	15	20	Y33328	E6-sFv peptide lin
33	60	80.0	15	20	Y27397	Flexible linker us
34	60	80.0	15	20	Y21600	EP-919566 peptide
35	60	80.0	15	20	Y03763	Linker peptide in
36	60	80.0	15	20	W87784	Antibody-beta-lact
37	60	80.0	15	21	Y79551	Linker peptide use
38	60	80.0	15	21	Y79552	Linker peptide use
39	60	80.0	15	21	Y70606	Protein encoded by
40	60	80.0	16	17	R99243	(Gly4Ser)3Ser link
41	60	80.0	17	20	W99361	Linker peptide for
42	60	80.0	18	15	R60525	Linkage peptide us
43	60	80.0	18	20	Y43500	Linker for dual av
44	60	80.0	18	21	Y83214	Peptide linker use
45	60	80.0	19	20	Y25402	Activity modulatin

ALIGNMENTS

RESULT 1
Y50706
ID Y50706 standard; peptide; 14 AA.
XX
AC Y50706;
XX
DT 08-FEB-2000 (first entry)
XX
DE VH-L-VL construct peptide linker 1.
XX
KW Immunoglobulin; light chain; VL region; heavy chain; VH region;
KW single-chain; antigen binding; variable domain; anticancer; treatment;
KW antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
KW tumor vaccine; autoimmune disease; inflammation; blood disorder;
KW nervous system; infection.
XX
OS Synthetic.
XX
PN DE19827239-A1.
XX
PD 23-DEC-1999.
XX
PF 18-JUN-1998; 98DE-1027239.
XX
PR 18-JUN-1998; 98DE-1027239.
XX
PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI Kontermann R, Sedlacek H, Mueller R;
XX
DR WPI; 1999-591691/51.
XX
PT Single chain molecule binding antigen, its preparation and medicine
PT containing this molecule - consists of binding some antigen with
PT different variable domain of light and heavy chain of immunoglobulin.

```
XX
PS   Claim 9; Page 13; 26pp; German.
XX
CC   This invention describes a novel single-chain molecule (I) that binds
CC   multiple antigens and comprises two variable domains of heavy
CC   immunoglobulin chains (VH) and two variable domains of light chains (VL).
CC   The domains are provided as two VH-VL constructs which are attached via
CC   a peptide (P). Any VH and VL may be replaced by their functional
CC   fragments. The products of the invention have anticancer, antiviral,
CC   antibacterial, antimalarial, and antiinflammatory activity. (I) are used
CC   to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC   diseases and inflammation (e.g. transplant rejection and arthritis),
CC   blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC   as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC   disorders and/or infections (by viruses or bacteria, or malaria),
CC   including, when (I) include a fusogenic peptide, use for gene transfer.
CC   This sequence represents a linker peptide used in the construction of the
CC   single chain molecule of the invention.
CC   NOTE: This specification is a treat as basic for CZ-9901215 in Derwent
CC   week 9951.
XX
SQ   Sequence   14 AA;


  Query Match             100.0%;  Score 75;  DB 20;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.0011;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||||||||||
Db       1 ggggsggrasgggs 14


RESULT   2
Y33596
ID   Y33596 standard; Protein; 14 AA.
XX
AC   Y33596;
XX
DT   20-DEC-1999  (first entry)
XX
DE   VH-VL domain linker peptide #8.
XX
KW   Antigen binding; single chain; variable domain; VH domain; light chain;
KW   heavy immunoglobulin chain; VL domain; anticancer; antiviral; tumor;
KW   antibacterial; antimalarial; antiinflammatory; treatment; prevention;
KW   diagnosis; vaccine; autoimmune disease; inflammation; blood disorder;
KW   transplant rejection; arthritis; nervous system disorder; infection.
XX
OS   Synthetic.
XX
PN   DE19816141-A1.
XX
PD   14-OCT-1999.
XX
PF   09-APR-1998;   98DE-1016141.
XX
PR   09-APR-1998;   98DE-1016141.
XX
PA   (HMRI ) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI   Kontermann R,  Sedlacek H,  Mueller R;
XX
DR   WPI; 1999-581511/50.
XX
PT   New polyspecific binding agents containing variable heavy and light
PT   constructs connected via peptide linker, used for treatment, prevention
PT   or diagnosis of e.g. cancer  -
XX
PS   Claim 9; Page 16; 20pp; German.
XX
CC   This sequence represents a novel single-chain molecule (I) that binds
CC   multiple antigens and comprises two variable domains of heavy
CC   immunoglobulin chains (VH), having specificities A and B and two
CC   variable domains of light chains (VL), also with specificities A and B.
CC   The domains are provided as two VH-VL constructs which are attached via
CC   a peptide (P). Any VH and VL may be replaced by their functional
CC   fragments. The products of the invention have anticancer, antiviral,
CC   antibacterial, antimalarial and antiinflammatory activity. (I) are used
CC   to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC   diseases and inflammation (e.g. transplant rejection and arthritis),
CC   blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC   as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC   disorders and/or infections (by viruses or bacteria, or malaria),
CC   including, when (I) include a fusogenic peptide, use for gene transfer.
CC   (I) are produced simply and in predominantly homogeneous form, in a wide
CC   variety of hosts, either in secreted or membrane-bound forms. This
CC   sequence represents a VH-VL domain linker peptide which is used to
CC   illustrate the method of the invention.
XX
SQ   Sequence   14 AA;


  Query Match             100.0%;  Score 75;  DB 20;  Length 14;
  Best Local Similarity   100.0%;  Pred. No. 0.0011;
  Matches   14;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||||||||||
Db       1 ggggsggrasgggs 14


RESULT   3
Y50707
ID   Y50707 standard; peptide; 15 AA.
XX
AC   Y50707;
XX
DT   08-FEB-2000  (first entry)
XX
DE   VH-L-VL construct peptide linker 2.
XX
KW   Immunoglobulin; light chain; VL region; heavy chain; VH region;
KW   single-chain; antigen binding; variable domain; anticancer; treatment;
KW   antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
KW   tumor vaccine; autoimmune disease; inflammation; blood disorder;
KW   nervous system; infection.
XX
OS   Synthetic.
XX
PN   DE19827239-A1.
XX
PD   23-DEC-1999.
XX
PF   18-JUN-1998;   98DE-1027239.
XX
PR   18-JUN-1998;   98DE-1027239.
XX
PA   (HMRI ) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI   Kontermann R,  Sedlacek H,  Mueller R;
XX
DR   WPI; 1999-591691/51.
XX
PT   Single chain molecule binding antigen, its preparation and medicine
PT   containing this molecule  - consists of binding some antigen with
PT   different variable domain of light and heavy chain of immunoglobulin.
XX
PS   Claim 9; Page 14; 26pp; German.
XX
CC   This invention describes a novel single-chain molecule (I) that binds
CC   multiple antigens and comprises two variable domains of heavy
CC   immunoglobulin chains (VH) and two variable domains of light chains (VL).
CC   The domains are provided as two VH-VL constructs which are attached via
CC   a peptide (P). Any VH and VL may be replaced by their functional
CC   fragments. The products of the invention have anticancer, antiviral,
```

CC antibacterial, antimalarial, and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC This sequence represents a linker peptide used in the construction of the
CC single chain molecule of the invention.
CC NOTE: This specification is a treat as basic for CZ-9901215 in Derwent
CC week 9951.
XX
SQ Sequence 15 AA;

Query Match 94.7%; Score 71; DB 20; Length 15;
Best Local Similarity 100.0%; Pred. No. 0.0035;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 1 GGGGSGGRASGGG 13
||||||||||||||
Db 1 ggggsggrasggg 13

RESULT 4
Y50708
ID Y50708 standard; peptide; 13 AA.
XX
AC Y50708;
XX
DT 08-FEB-2000 (first entry)
XX
DE VH-L-VL construct peptide linker 3.
XX
KW Immunoglobulin; light chain; VL region; heavy chain; VH region;
KW single-chain; antigen binding; variable domain; anticancer; treatment;
KW antiviral; antibacterial; antimalarial; antiinflammatory; diagnosis;
KW tumor vaccine; autoimmune disease; inflammation; blood disorder;
KW nervous system; infection.
XX
OS Synthetic.
XX
PN DE19827239-A1.
XX
PD 23-DEC-1999.
XX
PF 18-JUN-1998; 98DE-1027239.
XX
PR 18-JUN-1998; 98DE-1027239.
XX
PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI Kontermann R, Sedlacek H, Mueller R;
XX
DR WPI; 1999-591691/51.
XX
PT Single chain molecule binding antigen, its preparation and medicine
PT containing this molecule - consists of binding some antigen with
PT different variable domain of light and heavy chain of immunoglobulin.
XX
PS Example 1; Page 16; 26pp; German.
XX
CC This invention describes a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy
CC immunoglobulin chains (VH) and two variable domains of light chains (VL).
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,
CC antibacterial, antimalarial, and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC This sequence represents a linker peptide used in the construction of the
CC single chain molecule of the invention.
CC NOTE: This specification is a treat as basic for CZ-9901215 in Derwent
CC week 9951.
XX
SQ Sequence 13 AA;

Query Match 92.0%; Score 69; DB 20; Length 13;
Best Local Similarity 100.0%; Pred. No. 0.0053;
Matches 13; Conservative 0; Mismatches 0; Indels 0; Gaps 0;

Qy 2 GGGSGGRASGGGS 14
||||||||||||||
Db 1 gggsggrasgggs 13

RESULT 5
Y33589
ID Y33589 standard; Protein; 13 AA.
XX
AC Y33589;
XX
DT 20-DEC-1999 (first entry)
XX
DE VH-VL domain linker peptide #1.
XX
KW Antigen binding; single chain; variable domain; VH domain; light chain;
KW heavy immunoglobulin chain; VL domain; anticancer; antiviral; tumor;
KW antibacterial; antimalarial; antiinflammatory; treatment; prevention;
KW diagnosis; vaccine; autoimmune disease; inflammation; blood disorder;
KW transplant rejection; arthritis; nervous system disorder; infection.
XX
OS Synthetic.
XX
PN DE19816141-A1.
XX
PD 14-OCT-1999.
XX
PF 09-APR-1998; 98DE-1016141.
XX
PR 09-APR-1998; 98DE-1016141.
XX
PA (HMRI) HOECHST MARION ROUSSEL DEUT GMBH.
XX
PI Kontermann R, Sedlacek H, Mueller R;
XX
DR WPI; 1999-581511/50.
XX
PT New polyspecific binding agents containing variable heavy and light
PT constructs connected via peptide linker, used for treatment, prevention
PT or diagnosis of e.g. cancer -
XX
PS Example 1; Page 14; 20pp; German.
XX
CC This sequence represents a novel single-chain molecule (I) that binds
CC multiple antigens and comprises two variable domains of heavy
CC immunoglobulin chains (VH), having specificities A and B and two
CC variable domains of light chains (VL), also with specificities A and B.
CC The domains are provided as two VH-VL constructs which are attached via
CC a peptide (P). Any VH and VL may be replaced by their functional
CC fragments. The products of the invention have anticancer, antiviral,
CC antibacterial, antimalarial and antiinflammatory activity. (I) are used
CC to treat, prevent or diagnose tumors (e.g. as tumor vaccines), autoimmune
CC diseases and inflammation (e.g. transplant rejection and arthritis),
CC blood disorders (e.g. of the coagulation and/or circulatory systems, such
CC as anemia, leucopenia, thrombocytopenia and hypertension), nervous system
CC disorders and/or infections (by viruses or bacteria, or malaria),
CC including, when (I) include a fusogenic peptide, use for gene transfer.
CC (I) are produced simply and in predominantly homogeneous form, in a wide
CC variety of hosts, either in secreted or membrane-bound forms. This

```
CC   sequence represents a VH-VL domain linker peptide which is used to
CC   illustrate the method of the invention.
XX
SQ   Sequence   13 AA;


  Query Match             92.0%;  Score 69;  DB 20;  Length 13;
  Best Local Similarity   100.0%;  Pred. No. 0.0053;
  Matches   13;  Conservative    0;  Mismatches    0;  Indels    0;  Gaps    0;

Qy      2 GGGSGGRASGGGS 14
          |||||||||||||
Db      1 gggsggrasgggs 13


RESULT   6
Y43326
ID   Y43326 standard; Protein; 240 AA.
XX
AC   Y43326;
XX
DT   25-JAN-2000  (first entry)
XX
DE   Mouse BR96 sFv antibody.
XX
KW   BR96 sFv; antibody; mouse; immunoconjugate; antigen-binding region;
KW   tumour cell; cancer; therapy; carcinoma cell imaging.
XX
OS   Mus musculus.
XX
PN   US5980896-A.
XX
PD   09-NOV-1999.
XX
PF   14-JUN-1993;   93US-0077253.
XX
PR   30-JUN-1989;   89US-0374947.
PR   26-JUN-1990;   90US-0544246.
PR   01-JUN-1992;   92US-0892501.
PR   05-MAY-1993;   93US-0057444.
XX
PA   (BRIM ) BRISTOL-MYERS SQUIBB CO.
XX
PI   Hellstrom I,  Bruce KF,  Schreiber GJ,  Siegall C,  McAndrew S;
PI   Hellstrom KE;
XX
DR   WPI; 1999-633297/54.
DR   N-PSDB; Z31898.
XX
PT   Immunoconjugate comprising an antigen-binding region of a monoclonal
PT   antibody joined to a therapeutic agent -
XX
PS   Example 14; Fig 35; 132pp; English.
XX
CC   This sequence is the BR96 sFv antibody. The invention relates to an
CC   immunoconjugate comprising a molecule containing the antigen-binding
CC   region of the BR96 monoclonal antibody (ATCC 10036) joined to a
CC   therapeutic agent. The immunoconjugates selectively kill tumour cells and
CC   are therefore useful for the treatment of cancer. The BR96 antigen can be
CC   used in a method for imaging carcinoma cells.
XX
SQ   Sequence   240 AA;


  Query Match             85.3%;  Score 64;  DB 20;  Length 240;
  Best Local Similarity   85.7%;  Pred. No. 0.31;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1 GGGGSGGRASGGGS 14
          |||||||  |||||
Db    117 ggggsggggsgggs 130


RESULT   7
W94178
ID   W94178 standard; Protein; 240 AA.
XX
AC   W94178;
XX
DT   14-APR-1999  (first entry)
XX
DE   Murine BR96 monoclonal antibody.
XX
KW   BR 96; monoclonal antibody; antigen-binding region; carcinoma; murine;
KW   immunotoxin; radioactive conjugate; enzyme; cytotoxic drug.
XX
OS   Mus musculus.
XX
PN   US5869045-A.
XX
PD   09-FEB-1999.
XX
PF   02-JUN-1995;   95US-0459354.
XX
PR   14-JUN-1993;   93US-0077253.
PR   30-JUN-1989;   89US-0374947.
PR   26-JUN-1990;   90US-0544246.
PR   05-MAY-1993;   93US-0057444.
PR   02-JUN-1995;   95US-0459354.
XX
PA   (BRIM ) BRISTOL-MYERS SQUIBB CO.
XX
PI   Bruce KF,  Hellstrom I,  Hellstrom KE,  Schreiber GJ;
XX
DR   WPI; 1999-152693/13.
DR   N-PSDB; X06697.
XX
PT   BR96 monoclonal antibody fragments - for treatment or diagnosis of
PT   carcinomas
XX
PS   Example 4; Fig 35A-B; 132pp; English.
XX
CC   This represents a murine BR96 monoclonal antibody. The invention
CC   provides a BR96 polypeptide comprising the antigen-binding regions of
CC   the BR96 monoclonal antibody produced by hybridoma Hb10036 [ATCC HB
CC   10036]. The antibody fragments and their functional equivalents are used
CC   to kill human carcinoma cells or to prepare conjugates, e.g.
CC   immunotoxins, radioactive conjugates or enzyme conjugates capable of
CC   converting prodrugs into cytotoxic drugs, for treatment or diagnosis of
CC   human carcinomas.
XX
SQ   Sequence   240 AA;


  Query Match             85.3%;  Score 64;  DB 20;  Length 240;
  Best Local Similarity   85.7%;  Pred. No. 0.31;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy      1 GGGGSGGRASGGGS 14
          |||||||  |||||
Db    117 ggggsggggsgggs 130


RESULT   8
Y77553
ID   Y77553 standard; Protein; 240 AA.
XX
AC   Y77553;
XX
DT   03-MAY-2000  (first entry)
XX
DE   Amino acid sequence of murine chimeric MAb BR96 sFv.
XX
KW   Carcinoma; monoclonal antibody; antigen-binding region; BR96; mouse;
KW   Ley carbohydrate determinant; breast; colon; ovary; lung; human;
KW   epithelial cell; gastrointestinal tract; tumour.
```

```
XX
OS   Mus sp.
XX
PN   US6020145-A.
XX
PD   01-FEB-2000.
XX
PF   03-NOV-1994;   94US-0333840.
XX
PR   14-JUN-1993;   93US-0077253.
PR   26-JUN-1990;   90US-0544246.
PR   30-JUN-1989;   89US-0374947.
PR   05-MAY-1993;   93US-0057444.
XX
PA   (BRIM ) BRISTOL-MYERS SQUIBB CO.
XX
PI   Hellstrom KE,  Bruce KF,  Schreiber GJ,  Hellstrom I;
XX
DR   WPI; 2000-146882/13.
DR   N-PSDB; Z58952.
XX
PT   Using an antigen-binding region of murine monoclonal antibody BR96 for
PT   detection of carcinomas in human tissue -
XX
PS   Example 14; Fig 35A-B; 133pp; English.
XX
CC   The invention relates to a method for determining the presence of
CC   carcinoma in human tissue that comprises contacting a specimen of tissue
CC   with a monoclonal antibody or antigen-binding fragment that has an
CC   antigen-binding region of murine monoclonal antibody (MAb) BR96 produced
CC   by hybridoma ATCC 10036 and specifically binds to human carcinoma cells,
CC   and detecting the binding of the antibody or fragment to the tissue. The
CC   method can be used to detect carcinomas in human tissue. BR96
CC   specifically recognizes a portion of an epitope of a Ley carbohydrate
CC   determinant abundantly expressed on carcinomas of the breast, colon,
CC   ovary and lung and also on epithelial cells from the gastrointestinal
CC   tract. BR96 has high specificity for carcinoma cells of different organ
CC   types but shows no binding to other types of tumor cells e.g. T-cell
CC   lymphoma cell lines, B-cell lymphoma cell lines and melanoma cell lines.
CC   The present sequence represents the amino acid sequence of murine
CC   chimeric MAb BR96 sFv.
XX
SQ   Sequence   240 AA;


  Query Match             85.3%;  Score 64;  DB 21;  Length 240;
  Best Local Similarity   85.7%;  Pred. No. 0.31;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||| |||||
Db     117 ggggsggggsgggs 130


RESULT   9
W37085
ID   W37085 standard; Protein; 301 AA.
XX
AC   W37085;
XX
DT   14-JUL-1998  (first entry)
XX
DE   Anti-human SC single chain Fv/protamine fusion protein.
XX
KW   Fusion protein; SC single chain Fv/protamine fusion protein; SECR;
KW   exogenous gene; serpin enzyme complex receptor; gene therapy;
KW   target binding moiety.
XX
OS   Homo sapiens.
OS   Mus sp.
XX
PN   WO9746100-A1.
XX
PD   11-DEC-1997.
XX
PF   03-JUN-1997;   97WO-US09858.
XX
PR   03-JUN-1996;   96US-0656906.
XX
PA   (UYCA-) UNIV CASE WESTERN RESERVE.
XX
PI   Davis PB,  Ferkol TW,  Ziady A;
XX
DR   WPI; 1998-041783/04.
DR   N-PSDB; V00611.
XX
PT   Delivering compacted exogenous nucleic acid to cells - by targeting
PT   the serpin enzyme complex receptor, used in gene therapy
XX
PS   Example 9; Pages 120-121; 158pp; English.
XX
CC   This represents an anti-human SC single chain Fv/protamine fusion protein
CC   sequence containing a target binding moiety capable of binding to a
CC   serpin enzyme complex receptor (SECR), and a nucleic acid binding moiety.
CC   This can be used in a method for delivering an oligonucleotide to a
CC   mammalian cell. The method comprises conjugating the target binding
CC   moiety to a nucleic acid binding moiety to form a carrier and coupling
CC   the carrier to an expression vector encoding one or more gene products
CC   to form a pharmaceutical composition. A mammalian cell having on its
CC   surface SECR, is contacted with the pharmaceutical composition under
CC   conditions allowing binding to the receptor resulting in delivery of the
CC   pharmaceutical composition to the interior of the cell. The composition
CC   and method are used for the introduction of exogenous genetic material
CC   into target host cells expressing SECR on their surface. The nucleic acid
CC   may encode a functional wild-type or mutant gene or may be an antisense
CC   sequence or other nucleic acid having a therapeutic effect. The fusion
CC   protein may comprise a protein portion having therapeutic properties,
CC   e.g. enzymatic activity, cytokine activity and antibiotic activity which
CC   is delivered to a cell surface via the SECR binding moiety. The nucleic
CC   acid can be compacted at high concentrations with the carrier molecule at
CC   a critical salt concentration. The condensation of such complexes
CC   provides structural features to the DNA/cationic lipid complex that
CC   prolong in vivo expression.
XX
SQ   Sequence   301 AA;


  Query Match             85.3%;  Score 64;  DB 19;  Length 301;
  Best Local Similarity   85.7%;  Pred. No. 0.38;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||| |||||
Db     113 ggggsggggsgggs 126


RESULT   10
W56163
ID   W56163 standard; Protein; 738 AA.
XX
AC   W56163;
XX
DT   28-JUL-1998  (first entry)
XX
DE   New DNA sequence isolated from Pinctada fucata.
XX
KW   Pinctada fucata; protein; cosmetic.
XX
OS   Pinctada fucata.
XX
PN   JP10080285-A.
XX
PD   31-MAR-1998.
XX
PF   28-MAY-1997;   97JP-0138461.
XX
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PR   15-JUL-1996;   96JP-0184459.
XX
PA   (MIKI-) MIKIMOTO SEIYAKU KK.
XX
DR   WPI; 1998-254410/23.
DR   N-PSDB; V22683.
XX
PT   New cDNA and e.g. vector, host cell and polypeptide - used to
PT   produce polypeptide in high yields, which is used in cosmetics
XX
PS   Claim 9; Pages 9-11; 15pp; Japanese.
XX
CC   The present sequence represents protein encoded by a new DNA sequence
CC   isolated from Pinctada fucata. The protein be used as an ingredient
CC   in cosmetics.
XX
SQ   Sequence   738 AA;


  Query Match             85.3%;  Score 64;  DB 19;  Length 738;
  Best Local Similarity   85.7%;  Pred. No. 0.88;
  Matches   12;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           |||||||  |||||
Db     671 ggggsggggsgggs 684


RESULT  11
R86794
ID   R86794 standard; Peptide; 16 AA.
XX
AC   R86794;
XX
DT   01-JUL-1996  (first entry)
XX
DE   GM-CSF/EPO linker fragment, L1.
XX
KW   Linker sequence; granulocyte macrophage-colony stimulating factor;
KW   GM-CSF; erythropoietin; EPO; hybrid protein; stimulation;
KW   haematopoiesis; erythroid differentiation.
XX
OS   Synthetic.
XX
PN   WO9533057-A1.
XX
PD   07-DEC-1995.
XX
PF   26-MAY-1995;   95WO-EP02011.
XX
PR   27-MAY-1994;   94IT-0FI0106.
XX
PA   (MENA ) MENARINI RICERCHE SUD SPA.
XX
PI   Carloni C,  Coscarella A,  De Santis R,  Mele A;
XX
DR   WPI; 1996-030568/03.
DR   N-PSDB; T06969.
XX
PT   GM-CSF-EPO hybrid proteins contg. linker sequence  - to stimulate
PT   haematopoiesis, with higher action specificity compared to unlinked
PT   granulocyte macrophage colony stimulating factor (GM-CSF) and
PT   erythropoietin (EPO)
XX
PS   Claim 5; Fig 3; 26pp; English.
XX
CC   The sequences given in R86794-96 represent the linker sequences of the
CC   invention.  These linkers are used to join granulocyte macrophage-
CC   colony stimulating factor (GM-CSF) and erythropoietin (EPO) in the
CC   formation of a hybrid protein.  The hybrid protein is useful for the
CC   stimulation of haematopoiesis.  The fused molecules exhibit a higher
CC   specificity of action on erythroid differentiation, compared to that
CC   of an equimolar mixture of unlinked GM-CSF and EPO molecules.
XX
SQ   Sequence   16 AA;


  Query Match             81.3%;  Score 61;  DB 17;  Length 16;
  Best Local Similarity   84.6%;  Pred. No. 0.06;
  Matches   11;  Conservative    0;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGG 13
           |||||||  ||||
Db       2 ggggsggagsggg 14


RESULT  12
Y08856
ID   Y08856 standard; Protein; 232 AA.
XX
AC   Y08856;
XX
DT   13-AUG-1999  (first entry)
XX
DE   Expression construct pTC53 protein fragment 9.
XX
KW   Pseudo-type retroviral vector; surface capsid protein; virus core;
KW   retroviral packaging cell; psi-negative expression construct; gag gene;
KW   pol gene; cell-specific transduction; cell targeting; gene therapy;
KW   vaccination; diagnosis; cystic fibrosis; ADA-deficiency; HIV-1 infection;
KW   chronic granulomatosis.
XX
OS   Spleen necrosis virus.
OS   Mus sp.
OS   Synthetic.
XX
PN   WO9928488-A2.
XX
PD   10-JUN-1999.
XX
PF   27-NOV-1998;   98WO-DE03542.
XX
PR   28-NOV-1997;   97DE-1052855.
XX
PA   (BUND ) BUNDESREPUBLIK DEUT PAUL-EHRLICH-INST.
XX
PI   Cichutek K,  Merget-Millitzer H;
XX
DR   WPI; 1999-358132/30.
DR   N-PSDB; X77617.
XX
PT   Pseudo-type retroviral vectors with modified surface capsid proteins
XX
PS   Disclosure; Fig 4A-B; 41pp; German.
XX
CC   This invention describes novel pseudo-type retroviral vectors with
CC   modified surface capsid proteins. The vectors of the invention consist
CC   essentially of a virus core chosen from the group of murine leukemia
CC   virus (MLV), human immunodeficiency virus (HIV), simian immunodeficiency
CC   virus (SIV), lentivirus or Foamyvirus and a virus capsid protein from
CC   spleen necrotic virus (SNV). The invention also describes a retroviral
CC   packaging cell for the retroviral vector above, and also transformed with
CC   one or more psi-negative expression constructs, the gag and pol gene
CC   products of MLV, HIV, SIV or foamyvirus, or also with a psi-negative
CC   SNV-env expression construct and/or psi-negative SNV-ENV foreign
CC   polypeptide- SNV-HIV-ENV or SNV-SIV-ENV expression construct. The
CC   pseudo-type retroviral vectors with modified surface capsid proteins are
CC   suitable for cell-specific transduction of a selected mammal cell type
CC   (cell targeting). The methods are useful for the production of the
CC   pseudo-type retroviral vectors and for gene transfer in selected cell
CC   types. The vectors can be used in medicaments for gene therapy,
CC   vaccination or diagnosis. They are particularly useful for therapy of
CC   cystic fibrosis, ADA-deficiency, chronic granulomatosis or HIV-1
CC   infection. This sequence represents protein fragments of the expression
CC   construct pTC53 which is composed from the SNV ENV protein and a murine
CC   derived scFv fragment.
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XX
SQ   Sequence   232 AA;


  Query Match             81.3%;  Score 61;  DB 20;  Length 232;
  Best Local Similarity   78.6%;  Pred. No. 0.7;
  Matches   11;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||| : ||||
Db      42 ggggsgggsggggs 55


RESULT  13
Y08769
ID   Y08769 standard; Protein; 232 AA.
XX
AC   Y08769;
XX
DT   13-AUG-1999  (first entry)
XX
DE   Expression construct pTC53 protein fragment 9.
XX
KW   Cell-specific retroviral vector; antibody domain; vaccination; scFv;
KW   cell-specific transduction; B cell RNA; variable region; heavy chain;
KW   light chain; immunoglobulin; psi-negative; retroviral Env protein;
KW   capsid protein; cell targeting; gene therapy; diagnosis; cystic fibrosis;
KW   ADA-deficiency; chronic granulomatosis; HIV-1 infection.
XX
OS   Spleen necrosis virus.
OS   Mus sp.
OS   Synthetic.
XX
PN   WO9928489-A2.
XX
PD   10-JUN-1999.
XX
PF   27-NOV-1998;   98WO-DE03543.
XX
PR   28-NOV-1997;   97DE-1052854.
XX
PA   (BUND ) BUNDESREPUBLIK DEUT PAUL-EHRLICH-INST.
XX
PI   Cichutek K,  Engelstaedter M;
XX
DR   WPI; 1999-371131/31.
DR   N-PSDB; X77614.
XX
PT   Cell-specific retroviral vectors with antibody domains suitable for
PT   cell-specific transduction of selected mammal cell types - useful
PT   for vaccination and gene therapy for treatment of, e.g. cystic
PT   fibrosis
XX
PS   Disclosure; Fig 4A-B; 38pp; German.
XX
CC   This invention describes the construction of novel cell-specific
CC   retroviral vectors with antibody domains suitable for cell-specific
CC   transduction of selected mammal cell types. The invention describes a
CC   method to produce cell-specific retroviral vectors which consists
CC   essentially of the following steps: (a) immunization of a mammal with
CC   one or more cell populations (b) isolation of RNA from the immunized
CC   mammal, especially the B cell RNA (c) production of a cDNA strand of
CC   the variable region of the heavy and light chains of the immunoglobulins
CC   isolated from the RNA by RT-PCR with primers for the respective
CC   immunoglobulin chains, where the primer nucleic acid sequences are for
CC   an oligopeptide linker (d) ligation of the cDNA strain to scFv-cDNA (e)
CC   ligation of the scFv cDNA in a phagemid vector and transformation of a
CC   host bacterium with the vector (f) isolation of phage, by selection of
CC   phage that bind to the cell population used in step (a) (g) cleavage of
CC   the scFv coding DNA fragments from the cell-specific phage and ligation
CC   into a psi-negative retroviral Env-expression vector (h) transformation
CC   of a Env-ScFv expression vector to be maintained in a packaging cell and
CC   (i) isolation of a packaging cell with the retroviral vectors. The
CC   pseudo-type retroviral vectors with modified surface capsid proteins are
CC   suitable for cell-specific transduction of a selected mammal cell type
CC   (cell targeting). The methods are useful for the production of the
CC   pseudo-type retroviral vectors and for gene transfer in selected cell
CC   types. The vectors can be used in medicaments for gene therapy,
CC   vaccination or diagnosis. They are particularly useful for therapy of
CC   cystic fibrosis, ADA-deficiency, chronic granulomatosis or HIV-1
CC   infection. This sequence represents a fragment of the expression
CC   construct pTC53 which is composed from the SNV ENV protein and a murine
CC   derived scFv fragment.
XX
SQ   Sequence   232 AA;


  Query Match             81.3%;  Score 61;  DB 20;  Length 232;
  Best Local Similarity   78.6%;  Pred. No. 0.7;
  Matches   11;  Conservative    1;  Mismatches    2;  Indels    0;  Gaps    0;

Qy       1 GGGGSGGRASGGGS 14
           ||||||| : ||||
Db      42 ggggsgggsggggs 55


RESULT  14
Y44413
ID   Y44413 standard; protein; 339 AA.
XX
AC   Y44413;
XX
DT   22-MAR-2000  (first entry)
XX
DE   B7.2-beta 2 microglobulin fusion protein-1.
XX
KW   B7.2-b2m fusion protein; murine B7.2 co-stimulatory molecule; b2m;
KW   human beta-2 microglobulin; tumour antigen; bacterial antigen;
KW   viral antigen; tumour-specific cytotoxic T-cell; vaccination;
KW   immune therapy.
XX
OS   Mus sp.
OS   Homo sapiens.
XX
FH   Key             Location/Qualifiers
FT   Domain          2..220
FT                   /note= "Extracellular portion of murine B7.2"
FT   Region          221..225
FT                   /note= "Sequence created by insertion of restriction site
FT                   in the nucleic acid sequence"
FT   Region          226..240
FT                   /note= "linker sequence"
FT   Domain          241..339
FT                   /note= "Mature form of human beta-2 microglobulin"
XX
PN   WO9964597-A1.
XX
PD   16-DEC-1999.
XX
PF   03-JUN-1999;   99WO-US12309.
XX
PR   10-JUN-1998;   98US-0088813.
XX
PA   (USSH ) US DEPT HEALTH & HUMAN SERVICES.
XX
PI   Ribaudo RK,  Shields M;
XX
DR   WPI; 2000-116544/10.
XX
PT   New beta-2 microglobulin fusion proteins, used for the preparation of
PT   vaccines for use against bacterial antigens -
XX
PS   Claim 15; Fig 3; 49pp; English.
XX
CC   The present sequence is a B7.2- b2m fusion protein comprising murine B7.2
CC   co-stimulatory molecule and mature human beta-2 microglobulin. The
```

CC presence of fusion protein on the tumour cell surface enhances the immune
CC system response to the tumour antigens present on tumour cell surface by
CC boosting the generation of tumour-specific cytotoxic T-cells. These
CC proteins can effectively target a desired protein to the outer membrane
CC of a cell. The proteins and corresponding nucleic acids encoding them can
CC be used for vaccination against bacterial, viral or tumour antigens. The
CC products can also be used for immune therapy.
XX
SQ Sequence 339 AA;

Query Match 81.3%; Score 61; DB 21; Length 339;
Best Local Similarity 78.6%; Pred. No. 0.99;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GGGGSGGRASGGGS 14
||||||| |||| :
Db 226 ggggsggggsggga 239

RESULT 15
Y44414
ID Y44414 standard; protein; 358 AA.
XX
AC Y44414;
XX
DT 22-MAR-2000 (first entry)
XX
DE B7.2-beta 2 microglobulin fusion protein-2.
XX
KW B7.2-b2m fusion protein; murine B7.2 co-stimulatory molecule; b2m;
KW human beta-2 microglobulin; tumour antigen; bacterial antigen;
KW viral antigen; tumour-specific cytotoxic T-cell; vaccination;
KW immune therapy.
XX
OS Mus sp.
OS Homo sapiens.
XX
FH Key Location/Qualifiers
FT Peptide 1..20
FT /label= Signal_peptide
FT /note= "Derived from human beta-2 microglobulin"
FT Domain 21..239
FT /note= "Extracellular portion of murine B7-2"
FT Region 240..244
FT /note= "Sequence created by insertion of restriction site
FT in the nucleic acid sequence"
FT Region 245..249
FT /label= linker_sequence
FT Domain 260..358
FT /note= "Mature form of human beta-2 microglobulin"
XX
PN WO9964597-A1.
XX
PD 16-DEC-1999.
XX
PF 03-JUN-1999; 99WO-US12309.
XX
PR 10-JUN-1998; 98US-0088813.
XX
PA (USSH) US DEPT HEALTH & HUMAN SERVICES.
XX
PI Ribaudo RK, Shields M;
XX
DR WPI; 2000-116544/10.
XX
PT New beta-2 microglobulin fusion proteins, used for the preparation of
PT vaccines for use against bacterial antigens -
XX
PS Claim 15; Fig 4; 49pp; English.
XX
CC The present sequence is a B7.2-b2m fusion protein having the hbeta-2
CC signal sequence. The fusion protein comprises murine B7.2 co-stimulatory
CC molecule and mature human beta-2 microglobulin. Signal peptides directs
CC expression of the protein to a specified location in the cell. The
CC presence of fusion protein on the tumour cell surface enhances the immune
CC system response to the tumour antigens present on tumour cell surface by
CC boosting the generation of tumour-specific cytotoxic T-cells. These
CC proteins can effectively target a desired protein to the outer membrane
CC of a cell. The proteins and corresponding nucleic acids encoding them can
CC be used for vaccination against bacterial, viral or tumour antigens. The
CC products can also be used for immune therapy.
XX
SQ Sequence 358 AA;

Query Match 81.3%; Score 61; DB 21; Length 358;
Best Local Similarity 78.6%; Pred. No. 1;
Matches 11; Conservative 1; Mismatches 2; Indels 0; Gaps 0;

Qy 1 GGGGSGGRASGGGS 14
||||||| |||| :
Db 245 ggggsggggsggga 258

Search completed: March 15, 2001, 10:52:22
Job time: 972 sec